TM 2301 – RS MEDIUM BASE

INTENDED USE
For selective isolation, cultivation and presumptive identification of *Aeromonas hydrophila*.

PRODUCT SUMMARY AND EXPLANATION
RS Medium was formulated by Rimler and Shotts based on the principle of Xylose-Lysine (XL) Agars. It is used for selective isolation and presumptive identification of *Aeromonas hydrophila* and other gram-negative bacteria based on their ability to decarboxylate lysine and ornithine, maltose fermentation and H_2S production.

COMPOSITION

Ingredients	Gms / Ltr
Yeast extract	3.000
Maltose	3.500
L-Cysteine hydrochloride	0.300
L-Lysine hydrochloride	5.000
L-Ornithine hydrochloride	6.500
Sodium thiosulphate	6.800
Ferric ammonium citrate	0.800
Sodium deoxycholate	1.000
Sodium chloride	5.000
Bromothymol blue	0.030
Agar	13.500

PRINCIPLE
This medium consists of Yeast extract which acts as a source of nutrients. Sodium thiosulphate, L-cysteine hydrochloride and ferric ammonium citrate are the indicators of H_2S production. The medium contains maltose, which is mostly fermented by all *Aeromonas*. Maltose fermentation is indicated by bromothymol blue. Sodium deoxycholate and novobiocin inhibit gram-positive bacteria and *Vibrio* species. *Citrobacter freundii* usually produce H_2S but occasionally negative strains exist. The medium contains Lcysteine and L-ornithine, which are often decarboxylated by enteric bacteria to give alkaline products. Lysine positive and ornithine positive strains of *Aeromonas* may not have the typical strong yellow colour because of alkaline products produced during decarboxylation of the amino acids.

INSTRUCTION FOR USE
- Dissolve 45.43 grams in 990 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE.
- Cool to 45-50°C and aseptically add rehydrated content of 1 vial of Novobiocin Supplement.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light green homogeneous free flowing powder.
Appearance of prepared medium : Dark green coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed with added Novobiocin Supplement after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Maltose fermentation	Lysine/ Ornithine decarboxylation	H_2S	Incubation Temperature	Incubation Period
Aeromonas hydrophila	7966	50-100	Good	40-50%	Positive reaction, yellow coloured colonies	Negative reaction	Negative reaction	35-37°C	24 Hours
Citrobacter freundii	8090	50-100	Good	40-50%	Negative reaction	Variable reaction	Positive, black centered colonies	35-37°C	24 Hours
Escherichia coli	25922	50-100	Good	40-50%	Negative reaction	Variable reaction	Negative reaction	35-37°C	24 Hours
Proteus vulgaris	13315	50-100	Good	40-50%	Positive reaction, yellow coloured colonies	Negative reaction	Positive, black centered colonies	35-37°C	24 Hours
Salmonella Typhi	6539	50-100	Good	40-50%	Positive reaction, yellow coloured colonies	Negative reaction	Negative reaction	35-37°C	24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

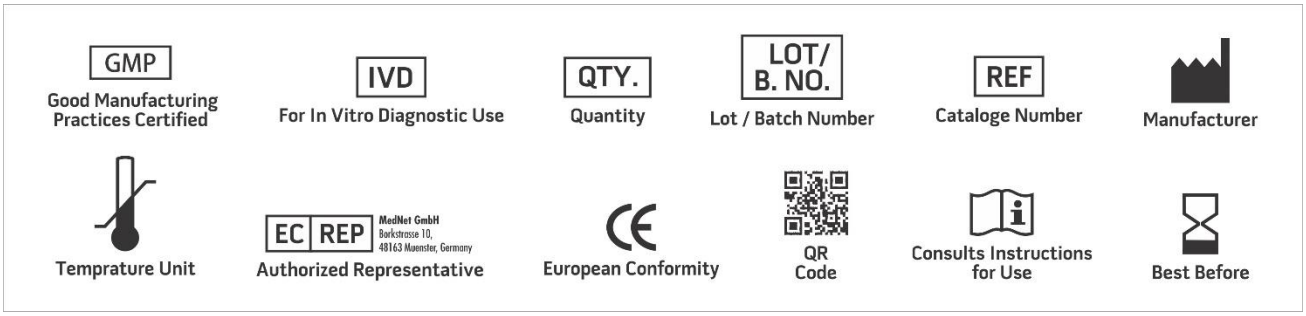
DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
2. Shotts E. B. Jr. and Rimler R., 1973, Appl. Microbiol., 26(4):550.

3. Taylor W. I. and Harris B., 1965, Am. J. Clin. Pathol., 44:476.
4. Taylor W. I., 1965, Am. J. Clin. Pathol., 44:471.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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